

REMARKS

The following remarks form a full and complete response to the final Office Action dated March 18, 2010. Claims 8-11, 13 and 15-50 were previously withdrawn from consideration without prejudice or disclaimer. Accordingly, reconsideration of claims 1-7, 12 and 14 is respectfully requested in view of the following remarks.

Claim Rejections Under 35 U.S.C. § 103

The Patent Office rejected claims 1, 6-7 and 12 under 35 U.S.C. § 103(a) as allegedly unpatentable over U.S. Patent No. 5,963,132 to Yoakum ("Yoakum") in view of U.S. Patent No. 5,482,008 to Stafford et al. ("Stafford"). Applicants traverse the rejection on the basis that claims 1, 6-7 and 12 recite subject matter neither disclosed nor suggested by the combination of Yoakum and Stafford.

Yoakum relates to an encapsulation of the circuitry of an EID or RFID transponder using an epoxy to both secure the circuitry and seal the encapsulant. *See* Yoakum at col. 2, lines 35-39. The transponder may include signal processing circuitry that includes an integrated circuit, a circuit board, and an antenna. *Id.* at col. 3, lines 15-22. An epoxy is used to fill the encapsulant containing the transponder's signal processing circuitry and antenna. *Id.* at col. 3, lines 29-32. Yoakum, however, fails to disclose or suggest each and every feature of the claimed invention.

Claim 1 recites, amongst other things, a circuit encased within a brick of epoxy, wherein the brick of epoxy containing the circuit is housed in a housing, and a second epoxy disposed between the outer surface of the brick of epoxy and an inner surface of the housing. These features of claim 1 are neither disclosed nor suggested by the cited prior art references.

For instance, Yoakum fails to disclose or suggest a biocompatible, human implantable apparatus comprising a second epoxy disposed between the outer surface of a brick of epoxy

encasing a circuit and an inner surface of a fully enclosed housing, as taught by claim 1. Instead, Yoakum merely discloses an epoxy 32 that fills the “entire interior volume of the encapsulant 34 which is not otherwise occupied by the transponder's signal processing circuitry 12 and the antenna 20.” *See* col. 3, lines 29-32; FIG. 2. On Page 2 of the Office Action, the Patent Office states that Yoakum discloses an implantable transponder comprising “a second epoxy (34) formed on the surface of the brick of epoxy (26).” However, element (34) is not a “second epoxy” formed on the surface of a brick of epoxy, but rather an “encapsulant, which is generally a cylinder one end of which is closed.” *See* col. 3, lines 23-24. Thus, Yoakum discloses sealing circuitry in an encapsulant using a single epoxy. This arrangement is the very one that causes the problems that the claimed invention seeks to remedy. As discussed in the specification of the claimed invention, “some attempts to encase a circuit from an MMA monomer encasement formulation result in a non-functional circuit because of un-repairable mechanical damage.” *See* Specification at ¶ 26¹. To address this mechanical damage problem, the present invention mechanically strengthens the circuit by reinforcing it with a pre-applied epoxy layer. *Id.* at ¶ 32.

Yoakum fails to disclose or suggest each and every element of the claimed invention and Stafford fails remedy its deficiencies. The Patent Office suggests that “[i]t would have been obvious to one having ordinary skill in the art at the time the invention was made to have a teaching of Stafford et al. employed in the apparatus of Yoakum in order to protect the apparatus from external impact.” Office Action at 3. However, even if Yoakum were modified by the teachings of Stafford, the claimed invention would not be reached.

Stafford relates to a bolus for administration to a ruminant animal and for retention in the rumen or reticulum of the animal. *See* Stafford at Abstract. The bolus includes an inner core and an outer shell. The inner core includes a plastics material that surrounds a stand-alone

¹ Citations to the Specification refer to U.S. Patent Application Publication No. 2005/0234316 (published Oct. 20, 2005).

transponder that is itself made up of a microchip code circuit, a coil, and housed within a glass tube. *Id.* at col. 5, lines 56 – 64; FIG. 3. The transponder disclosed by Stafford would not suffer from the same mechanical damage problem that the claimed invention addresses because it is already enclosed in a glass tub; reinforcement of the circuitry would be entirely unnecessary. Consequently, it is not surprising that Stafford fails to remedy any of the deficiencies that Yoakum has with respect to the claimed invention.

Specifically, Stafford, like Yoakum, fails to disclose or suggest a circuit encased within a brick of epoxy and a second epoxy disposed between the outer surface of the brick of epoxy and the inner surface of a fully enclosed housing, as claim 1 requires. Instead, Stafford simply discloses that an inner core can be housed in an outer shell.

Neither Yoakum nor Stafford, alone or in combination, discloses or suggest each and every feature of claim 1. Applicants, therefore, respectfully request the withdrawal of the rejection of claim 1. Claims 6-7 and 12, which depend either directly or indirectly from claim 1, are patentable for at least the same reasons stated above with respect to claim 1 as well as for the additional features they recite. Applicants, therefore, respectfully request the withdrawal of the rejection of claims 6-7 and 12.

The Patent Office rejected claims 2-5 and 14 under 35 U.S.C. § 103(a) as allegedly unpatentable over Yoakum and Stafford and further in view of Colvin, Jr. (U.S. Patent 6,304,766) (“Colvin”). Applicants traverse the rejection on the basis that claims 2-5 and 14 recite subject matter neither disclosed nor suggested by the combination of Yoakum, Stafford and Colvin.

Colvin, which the Patent Office cites for its disclosure of an optical-based sensor with a housing made from glass or an organic polymer or PMMA, fails to remedy the deficient teachings of Yoakum and Stafford with respect to the claimed invention. Specifically, Colvin,

like Yoakum and Stafford, fails to disclose or suggest a circuit encased within a brick of epoxy and a second epoxy disposed between the outer surface of the brick of epoxy and the inner surface of a fully enclosed housing, as required by claim 1. Claims 2-5 and 14 depend from Claim 1, therefore, these claims are patentable over the combination of Yoakum, Stafford, and Colvin for at least the reasons discussed above with respect to Claim 1.

CONCLUSION

For at least the foregoing reasons, applicants submit that claims 1-7, 12 and 14 are in condition for allowance and respectfully request that the Patent Office issue a Notice of Allowance.


If any additional payment is required, please charge the cost thereof to Counsel's Deposit Account No. 02-2135.

If for any reason the Examiner determines that the application is not now in condition for allowance, it is respectfully requested that the Examiner contact, by telephone, the Applicants' undersigned attorney at the indicated telephone number to arrange for an interview to expedite the disposition of this application.

Respectfully submitted,

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By:



Joseph A. Hynds
Registration No. 34,627
ROTHWELL, FIGG, ERNST & MANBECK, P.C.
1425 K Street, N.W., Suite 800
Washington, D.C. 20005
Telephone: (202)783-6040
jhynds@rfem.com
Attorney for Applicants